U.S. Patent Application 10/554,199

List of Current Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 - 11 (Cancelled).

12. (Currently amended) An apparatus for determining and/or monitoring at least one physical or chemical process variable of a medium, comprising:

at least one mechanically oscillatable unit which includes a tube and an internal oscillator, said tube having a first end and a second end;

a securement unit connected to <u>said first end of</u> said tube, <u>with an</u> <u>said first</u> end <u>of said tube being</u> turned away from the process, and <u>an</u> <u>said second</u> end <u>of said tube</u> <u>being</u> turned toward the process <u>is and</u> embodied as a free end, said tube surrounds said <u>inner internal</u> oscillator; and

at least one driving/receiving unit, said driving/receiving unit excites said at least one mechanically oscillatable unit to oscillate, respectively, wherein:

said internal oscillator is secured to said free end of said tube and has by an end turned toward the process;

said driving/receiving unit receives the oscillations of said at least one mechanically oscillatable unit; and

said internal oscillator has at least one groove/neck, which determines at least the oscillation frequency of said at least one mechanically oscillatable unit;

the resonance frequency of said tube is smaller than the resonance frequency of said internal oscillator; and

as a result any effect by said tube on the oscillation frequency of said at least one mechanically oscillatable unit is negligible.

13. (Previously presented) The apparatus as claimed in claim 12, wherein: said groove/neck is located in the direction of the end of said internal oscillator

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turned toward the process.

- 14. (Previously presented) The apparatus as claimed in claim 12, wherein: an additional weight is provided in said securement unit.
- 15. (Previously presented) The apparatus as claimed in claim 12, wherein: said tube and/or said internal oscillator have/has one of: a round, elliptical, square and polygonal cross section.
- 16. (Previously presented) The apparatus as claimed in claim 12, wherein: said internal oscillator is one of: hollow, solid and partially hollow and partially solid.
- 17. (Previously presented) The apparatus as claimed in claim 12, wherein: only a single piezo unit in said at least one driving/receiving unit is provided, which serves as a driving, and as a receiving, unit.
- 18. (Currently amended) The apparatus as claimed in claim 12, wherein: characterized in that

at least two piezo units in said at least one driving/receiving unit are provided, with least one piezo unit serving as driving unit and at least one piezo unit serving as receiving unit, said at least tow two piezo units being piezo units positioned at the same position.

19. (Previously presented) The apparatus as claimed in claim 17, wherein: said piezo unit is a piezoelectric element, which is composed of at least two segments, which are polarized in mutually opposite directions, said polarization directions lie parallel to an axis of rotation of said at least one mechanically oscillatable unit.

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- 20. (Previously presented) The apparatus as claimed in claim 12, wherein: said at least one driving/receiving unit is positioned between end of said internal oscillator turned toward the process and the end of said tube turned toward the process.
 - 21. (Previously presented) The apparatus as claimed in claim 12, wherein : said internal oscillator has at least a second groove/neck.
- 22. (Previously presented) The apparatus as claimed in claim 21, wherein: said at least one driving/receiving unit is positioned between said first groove/neck and said second groove/neck.